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ABSTRACT

Reviewed are research findings on special class placement for educable mentally retarded children and proposed are administrative and curricular alternatives. Research on special class placement is described as inconclusive and relying on untested assumptions. Normalization and individualization are seen as underlying principles in assigning children to alternative specialized services. Administrative arrangements (such as non-graded and resource classrooms), instructional materials (including programed materials and teaching machines), and personnel roles (such as paraprofessionals and diagnostic specialists) are considered influential program factors. Profiled are four alternative programs, including the Harrison Resource Learning Center and the material prescription retrieval system of the Educational Modulation Center. Emphasized are the needs for general educators to become more accommodative of individual differences and special educators to implement educational alternatives based on sound research and clearly defined goals and objectives. (CL)

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TECHNICAL REPORTS

University of Minnesota Research, Development and Demonstration
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1. C. Clark & J. Greco. MELDS (Minnesota Early Learning Development Scheme) Glossary of Behavior and Signs. Occasional Paper #18. June 1973.

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ALTERNATIVES TO SPECIAL CLASS PLACEMENT FOR EDUCABLE MENTALLY RETARDED CHILDREN[1]

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Department of Health, Education, and Welfare

U.S. Office of Education
Bureau of Education for the Handicapped

ALTERNATIVES TO SPECIAL CLASS PLACEMENT FOR EDUCABLE MENTALLY RETARDED CHILDREN[1]

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Public schools first provided day school programs for educable mentally retarded (EMR) children in Providence, Rhode Island, in 1896. These initial attempts to provide special education services to retarded pupils assumed the form of special classes. Originally started as an effort to provide instruction for children who were typically excluded from the public schools, special classes in Europe and the United States were felt to embody a more flexible approach to education than institutional placement, since they enabled slow learners to enjoy normal social intercourse with children in regular classroom programs. Considered controversial even in 1896, the opening of the first special class for retarded children was announced by a Providence columnist in a sarcastic article entitled "The Fool Class" (Kanner, 1964). None other than Binnet and Simon, inventors of the first widely used general intelligence scale, stated that "to be a member of a special class can never be a mark of distinction, and such as do not merit it, must be spared the record (Binet & Simon, 1905; p. 82)." Even though early authorities recognized the limitations of such placements, special classes continued to develop as the primary means of providing special education assistance to retarded children.

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[1]Children classified as educable mentally retarded have IQs between approximately 50 and 80 on an individually administered test of general intelligence, and generally manifest significant impairments in the mastery of basic school subjects.

Stimulated largely by support from parents' groups and professional organizations, special education provisions for retarded pupils have expanded dramatically in the past 75 years, but particularly in the past 20 years. By 1966, more than 540,000 children were enrolled in programs for the mentally retarded (Mackie, 1969). Statistics indicate that by 1963 approximately 90 percent of the retarded children in special education programs were receiving instruction in self-contained special classes (Mackie, 1969), and probably were having little contact with more normal peers in school. While the number of retarded children served by other organizational arrangements has undoubtedly increased since 1963, a correct assumption might be that the self-contained classroom has continued to be the predominant pattern of special education for serving EMR children.

A number of authors recently have discussed the inappropriateness of such placement for educating many children classified as mentally retarded (cf. Christophos & Renz, 1969; Deno, 1970; Dunn, 1968; Johnson, 1962; Lilly, 1970). (Most of the present controversy has focused primarily on the issue of special class placement for borderline retarded children with IQs between approximately 70 and 85. The present authors believe that many of the arguments and issues in this area may be equally applicable to the problems of providing services to more seriously retarded children.) The growing disenchantment with prevailing practices in special education reflected in recent articles has resulted largely from the disappointing findings of empirical studies exploring the efficacy of special class placement for retarded children, and from the placement of disproportionate numbers of minority group children in special education classes (Chandler & Plakos, 1969; Dunn, 1968;

MacMillan, 1971; Wright, 1967).

An article by Dunn (1968) has been a catalyst for much controversy and introspection among special educators over the issue of special class placement for retarded children. The central thesis of Dunn's paper is that special educators have been derelict in imposing special class placement on mildly retarded children, particularly minority group children from low socio-economic status backgrounds. He further indicts special educators for their failure to develop viable administrative and curricular alternatives to special classes for mildly handicapped children. /The empirical support and logical rationale for the issues explicated by Dunn (1968) and others were thoroughly reviewed by MacMillan (1971) in a previous issue of Focus on Exceptional Children./

Empirical findings, legal pressures and social consciousness have created heated debate over the issue of how the field of special education should respond to the needs of retarded children. Summarized in Table 1 are some of the more common arguments advanced for and against special class placement for EMR children. While the validity of certain arguments on both sides of the present controversy appear beyond dispute, our contention is that much of the present debate over special class placement for retarded children has tended to result in the development of extreme positions--either unqualified endorsement of present practices or strident calls for their total abolition.

It is time to discontinue the needless squandering of professional energy on the dialectics of the special class issue. Unqualified endorsement of arguments for radical change or complete obeisance to conventional patterns contributes little to resolving the current

Table 1

Selected Positions on Special Class Placement for EMR Children[a]

Pros	Cons
1. Research evidence indicates that mentally retarded children in regular classrooms are usually rejected and isolated by more able classroom peers.	1. Special class placement isolates retarded child from more normal classroom peers.
2. Mentally retarded children in regular classrooms experience loss of self-esteem because of their inability to compete with more able classroom peers.	2. Special class placement results in stigmatizing the retarded child, resulting in a loss of self-esteem and lowered acceptance by other children.
3. It is logically absurd to assign children to instruction without considering differences in ability or achievement levels.	3. There is little evidence to support the efficacy of ability grouping for retarded or normal children.
4. Evidence on the efficacy of special classes is inconclusive since most studies possess significant flaws in research design.	4. Mildly retarded children make as much or more academic progress in regular classrooms as they do in special classrooms.
5. Criticisms of special classes are based ostensibly upon examples of poorly implemented programs.	5. There is little point in investing further energy in improving special classes, since this arrangement poorly serves the social and educational needs of children.
6. The alternatives to present practices are less desirable and would lead to a return to social promotion as an approach to dealing with mildly retarded children.	6. Other more flexible administrative and curricular arrangements should be developed to supplement or supplant special classes.
7. Properly implemented special classes are optimally suited to deal with the major learning problems of retarded children.	7. Special class arrangements inappropriately place the responsibility for academic failure on children rather than upon schools and teachers.
8. Special class arrangements should not be unfairly indicted for mistakes in diagnosis and placement.	8. The existence of special classes encourages the capricious misplacement of many children, particularly children from minority groups.
9. A democratic philosophy of education does not dictate that all children have the same educational experiences, but that all children receive an equal opportunity to learn according to their individual needs and abilities.	9. Special class placement is inconsistent with the tenets of a democratic philosophy of education because it isolates retarded from normal children, and vice versa.

[a]Most of the positions summarized in this table are based on recent articles by Dunn (1968), Milazzo (1970), Kidd (1970), Johnson (1962), Lilly (1970), and Christophos and Renz (1969).

challenges of providing equal educational opportunity to all children. As Alfred North Whitehead (1925) once noted:

> There are two principles inherent in the very nature of things, the spirit of change and the spirit of conservation. There can be nothing real without both.... Mere conservation without change cannot conserve, while mere change without conservation is a passage from nothing to nothing.

Little improvement in services to children is likely to accrue from demands to replace one form of organizational inflexibility with other, equally rigid patterns. What is required is not simply that children in special classes be returned to regular classrooms with no further assistance, but rather that a wide array of flexible service arrangements, intervention strategies, and support systems be designed to serve both handicapped children and their teachers. A focus on alternatives might reduce the present conflict by bringing the forces of change and those of conservation into closer juxtaposition.

The primary purpose of this article is to outline and discuss possible alternatives to special classes for serving the educational and social needs of EMR children. Along with an explication of various administrative and curricular alternatives, descriptions of selected programs will be provided which present a broader range of curricular options for children and teachers than are presently available through special class arrangements. However, to provide context for a discussion of administrative alternatives to special class placement the following section presents a brief discussion of research findings and selected assumptions bearing on the controversy over special class placement for retarded children.

General Findings and Assumptions

George Santayana once wrote that "those who do not remember the past are condemned to relive it." Special educators might in the future avoid many of the difficulties that have beset the development of past programs by examining the history of research and implementation of special classes for EMR children. Presented below are brief discussions of research findings and persistent assumptions related to this controversy.

The Evidence

During the past 40 years over 20 studies employing a variety of research designs, instruments and samples have reported findings concerning the efficacy of special class placement for EMR children. /The reader is directed to writings of Cegelka & Tyler (1970), Goldstein (1967), Guskin & Spicker (1968), Johnson (1962), Kirk (1964), and MacMillan (1971) for thorough discussions of the research findings in this area./ Early efforts focused on contrasting retarded children enrolled in regular classes with those in special classes within the same school systems. These studies typically found special class enrollees inferior to their regular class counterparts in academic areas, but comparable or slightly superior on measures of classroom adjustment and personality (Cegelka & Tyler, 1970; Kirk, 1964).

Since children are typically referred for special class placement for severe behavior problems as well as learning difficulties, retarded children in regular classes probably enjoyed advantages in achievement and may have possessed higher motivation to succeed in school relevant

tasks. This obvious selection bias favoring regular class children, along with the inadequate instrumentation employed to measure classroom adjustment and personality, rendered these early findings invalid.

Later studies sought to control sampling bias by using regular class comparison groups in school districts without special education classes (Blatt, 1958; Cassidy & Stanton, 1959). The findings of these studies were equivocal, with one study reporting no significant differences between regular and special class groups in achievement (Blatt, 1958), while the other reported differences favoring the regular class sample (Cassidy & Stanton, 1959). Again a sampling bias was present favoring the regular class retardates, since the regular class samples probably included a greater number of children who would not have been referred for placement in special classes (Goldstein, 1967).

Goldstein, Moss and Jordan (1965) attempted to control for problems of selection bias by randomly assigning retarded children to regular or special class placements upon entrance to the first grade. Attempts were also made in this study to avoid the methodological shortcomings of previous studies by improving instrumentation, by standardizing the special class curricula, and by employing recently certified special class teachers. After four years there were no significant differences between the two groups in either IQ gains or academic achievement. Post hoc analyses of small numbers of low-IQ (below 81) and high-IQ (above 80) children revealed that the low-IQ children profited more academically from a special class placement, while the high-IQ children achieved more in the regular classroom setting.

Evidence from studies on the efficacy of special classes is largely inconclusive, and provides little information on the effects of such placements upon children. Moreover, findings on the effects of placement on the personality development and personal adjustment of the retarded are particularly contradictory, leading MacMillan (1971) to conclude:

> ...We do not yet understand the effects of placement on personality. On the one hand we find evidence...indicating that the child suffers in a special class, while on the other the evidence indicates that he suffers in a regular class.... In other words...the child can't win--but all of the evidence is of questionable validity in terms of sampling bias, lack of control of pre-placement experiences, and the questionable nature of the criterion measures (p. 1).

The nature of research designs and findings leads inevitably to the conclusion that available evidence is less than conclusive, it is basically uninterpretable. As Nelson and Schmidt (1971) have noted, "statements about the efficacy of special classes presuppose a number of prior statements such as efficacy for whom, efficacy under what circumstances, efficacy at what times, and efficacy for what goal (p.382-383)...." Until issues cited by Nelson and Schmidt are considered in efficacy studies of special classes, generalization of available data beyond sample populations is extremely hazardous. Equally evident is that knowledge about the efficacy of special classes contributes little toward resolving the present controversy. Available data can be applied with equal validity to arguments favoring the maintenance of special classes as to those recommending the abolition of such placements. The polemical arguments, in short, remain more political than educational (Engel, 1969), and gather little or no support from the nearly 40 years of reported research.

One need that becomes painfully evident from a review of past

research efforts is that researchers have chosen to ignore the possibility that existing administrative arrangements in special education may effect individual children in different ways. Furthermore, the validity of extant findings is based on a number of unproven assumptions regarding the nature of special class programs. The following section explores a few of the persistent assumptions which have guided the expansion of services for retarded children.

Persistent Assumptions

Throughout the past 60 years several persistent assumptions regarding the nature and purposes of special classes have been invoked to defend program expansion. It seems instructive to examine these assumptions in order to extend our perspective on the present controversy, as well as to improve our understanding of the issues involved in the development of programs for handicapped children.

Homogenous grouping. Special class programs for retarded children were considered for instructional purposes as a means of narrowing the range of intragroup differences in children. The supposition was that children with IQ scores between 50 and 80 placed in special classes possessed highly similar instructional needs.

The contention that the range of IQ scores is reduced in special classes cannot be disputed. The range in special classes of individual differences on important educational characteristics, however, is not necessarily correspondingly reduced. In a large metropolitan area survey, the authors found that several special classes included children with reading achievement scores ranging from nonreading to sixth grade levels. The variability in other educationally relevant characteristics of these special classes was probably equally heterogeneous resulting

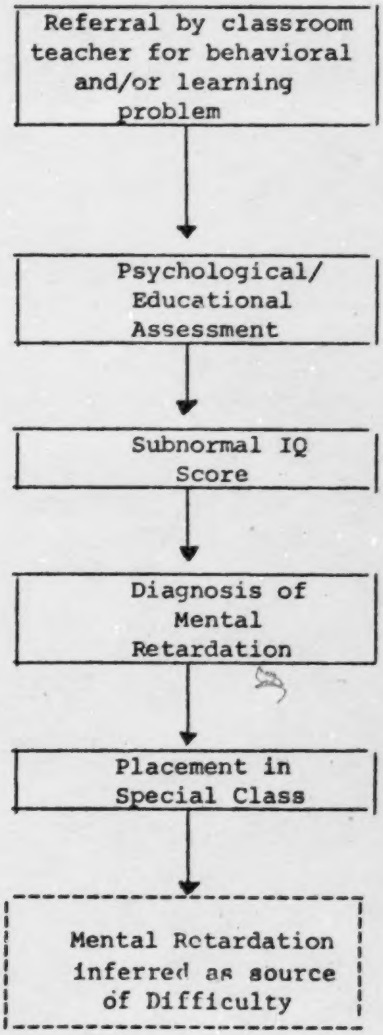
in groups of children with a wide rather than a narrow range of individual differences. Other studies have reported greater intra-group variability in performance on a variety of learning tasks among retardates than among normals (MacMillan, 1971). Thus, special classes most likely do not contain children with highly similar learning needs and characteristics.

Concepts of diagnosis are in large part responsible for viewing children in special classes as homogeneous groups, defeating the intent to provide individualized instruction. Figure 1 depicts the tautological reasoning which underlies much of the diagnostic and testing efforts in special education. This figure suggests that children are referred initially for specialized services because of specific problems in learning and/or adjustment. (No assumption is being made regarding the cause of the child's problem.) Following the initial referral, an assessment of the child is conducted in the areas of intelligence and achievement. If the child scores low enough on the intelligence test he is generally referred for special education assistance. By the end of the diagnostic sequence, however, mental retardation emerges as a causal explanation of the child's problem(s). This specious ascription of causation to correlated events often leads to the conclusion that the problems of children with similar IQ scores arise from the same source (Reynolds, 1970). Once an assignment is made to a special class there is a strong inclination to view children on the basis of group rather than individual criteria.

No available evidence supports the contention that special classes

Figure 1

Typical Diagnostic Sequence in Special Education


Referral by classroom teacher for behavioral and/or learning problem
Psychological/ Educational Assessment
Subnormal IQ Score
Diagnosis of Mental Retardation
Placement in Special Class
Mental Retardation inferred as source of Difficulty

include children exhibiting similar educational needs, or that such placements lead to greater individualization of instruction. Unfortunately the assumption that children with similar intelligence quotients also resemble each other closely on other behavioral characteristics was seldom questioned in the development and implementation of programs.

Unique curriculum. Another persistent assumption in special education was that special classes afforded an opportunity to provide specialized curriculum for retarded children. While special educators publicly castigated the concept of the "watered-down" curriculum, programs in special classes actually closely resemble the types of experiences provided children in regular classes. In reviewing over 250 curriculum guides for mentally retarded children, Simches and Bohn (1963) were led to conclude:

> ...The indication is that special educators feel, that although much work is yet to be done in regard to refinement, what exists are essentially different curricula.... What does exist is the rephrasing and re-emphasizing of available courses of study used for normal children that do not even have the benefit of the form, structure, and sequence connected with standard curriculum development (pp. 86, 115).

The conclusions of Simches and Bohn suggest that the assumption of differentiated, carefully sequenced curricula for mentally retarded pupils was rarely implemented in special class programs.

Specially trained teachers. With the development of special classes, certification standards for teachers were prescribed in most states. State, college and university training standards for special class teachers typically specified lists of courses for certification rather than competencies necessary to teach children. The only truly comprehensive survey concerned with determining the competencies necessary to teach retarded children was published by Mackie, Williams and Dunn (1957),

For some unknown reason, however, the issue of what competencies special class teachers should possess was given only token consideration in professional literature or training programs in special education.

There is little evidence that training programs in special education have systematically evaluated the extent to which their trainees have mastered prescribed and agreed upon teaching skills. Instead, the stress in training programs has ostensibly been placed upon increasing the number of available teachers rather than on the quality of training, which leads to what Davis (1970) has characterized as a condition of "demand-degradable teacher standards"in special education. The assumption that specially trained teachers are necessary to teach retarded children in special classes remains untested. Moreover, there is little evidence that special educators have established unique training programs for teachers, or that they have evaluated the extent to which certified special education teachers possess the skills considered necessary to teach retarded children. While general educators may also stand indicted on these issues, the presumed advantages of specially trained teachers educating retarded children as yet remains unproven.

Summary. The persistent assumptions that special classes provided an optimal setting for individualized instruction, for providing differentiated curricula for retarded chidren, and for employing specially trained teachers remain untested. Ambiguity in goals and practices has resulted in a general failure to effectively implement special class programs (Brown, 1968; MacMillan, 1971). Considerable doubt exists, moreover, that special classes even if properly implemented are optimally suited to provide EMR children with individualized instruction, specialized curricula or specially trained teachers.

The historical development of special classes provides instructive lessons to guide the future development of services for retarded children. The first lesson is that the tendency to grasp at convenient nostrums as complete solutions for complex educational problems should be resisted. The second, equally important lesson is that successful implementation of programs requires that the assumptions underlying program development be verifiable (Nelson & Schmidt, 1971), and that programs be continually examined to assess whether assumptions are being appropriately implemented. A third lesson is that programs in special education have evolved without the benefit of clearly stated goals and sound philosophical concepts. Because assumptions underlying the development of special classes have not been monitored, service arrangements have closely paralleled the educational program in regular classes. In short, very little of special education for retarded children could be considered either special or specialized.

The following section includes a discussion of the application of two general philosophical principles to the development of programs, and an outline of selected educational alternatives for EMR children.

Educational Alternatives

Over the past 75 years special classes have emerged as the primary vehicle for providing educational opportunity for retarded children. Unfortunately, during this period we have learned little about the precise effects of special education services upon children. The search for effective models for serving EMR children has been hindered significantly by the implementation of programs which exemplify unclarified purposes and assumptions, as well as by the general failure of special educators to develop service models based upon accepted philosophical tenets.

The assumptions regarding the nature and effects of special class programs, moreover, have seldom been subjected to critical scrutiny (Brown, 1968).

The search for viable educational alternatives for EMR children might be facilitated by applying general philosophical principles to efforts in program development. The normalization principle is gaining increasing acceptance among professionals in the field of mental retardation. When applied to problems of program planning and implementation, this concept appears to embody a philosophical principle of considerable potential. Developed in Scandinavian countries, "the normalization principle means making available to the mentally retarded patterns and conditions of everyday life which are as close as possible to the norms and patterns of the mainstream of society (Nirje, 1969; p. 181)." Acceptance of the normalization principle in special education programs implies that retarded children should experience the educational and social activities generally provided normal children. Applying this principle to the problems of planning educational services for retarded children could change the existing pattern of service arrangements as well as current practices of allocating children to special education programs. Adoption of this principle would encourage the development of an array of service systems which would lead to partial or complete integration of EMR children into normal school routines. Furthermore, under this principle no child would be placed directly into segregated service arrangements unless it was certified that he was unable to be served in normal settings, even with specialized assistance. Acceptance of the normalization principle in special education programs would hopefully expunge the tendency to define services primarily in terms of special classes.

Another concept which might help guide program development is that of

individualization. Considered as raison d' être of special education, individualization more than any other word has served to symbolize special education. The concept is especially useful when defined as consisting of "planning and conducting, with each student, general programs of study and day-to-day lessons that are tailor-made to suit his learning needs and his characteristics as a learner (Heathers, 1971; p. 1)."

A commitment to the concepts of normalization and individualization might lead to overdue changes in the way children are assigned to special education services. Presently, children are allocated to special education services ostensibly on the basis of categories--i.e., mentally retarded, deaf, etc. (cf., Reynolds, 1970). While categorical designations such as mental retardation serve as indicators of educational problems, they provide little information of value for designing educational programs for children (Reynolds, 1970). Simply diagnosing children as mentally retarded accomplishes little. Instead, categorical approaches to planning instruction encourage practices of making qualitative rather than quantitative distinctions among children. Educational decisions about appropriate teaching strategies and organizational arrangements must be based upon relevant behavioral variables which predict differentially among contrasting instructional alternatives.

Stressing normalization and individualization in program development might clarify educational alternatives and identification procedures in assigning children to alternative, specialized programs. Perhaps a good way to gain some perspective on the matter of alternatives is to view

the school as encompassing a variety of possible influences which contribute to each child's development. These influences take the form of (1) administrative arrangements, (2) instructional roles of staff, and (3) instructional materials. The impact of educational forces on the development of children, as depicted in Figure 2, can be conceptualized as representing thrusts of services in a school program.

Implicit in Figure 2 is the contention that a child's failure in school can be caused by a number of factors, none of which is exclusive to the child or to the school system. /See Szasz (1970) and Clark (1970) for excellent discussions related to the causes of pupil failure./ If instructional alternatives shown in this Figure are viable, continuous and sensitized to the needs of children, the retarded child is likely to thrive. On the other hand, if the options available are limited and insensitive to the individual needs of children, educational development of retarded children will most likely be impaired. The child's educational development is thus dependent on the personal-social-cognitive qualities he manifests in interaction with the personal-professional qualities of instructional staff with whom he comes into contact. The model is interactive and implies that the educational difficulties experience by children result from the complex interaction of several factors, including the child's characteristics, instructional content and quality, and administrative arrangements.

An expanded concept of educational alternatives to special classes emerges in Table 2. Implied is the need for increased sensitization to the needs of handicapped children through resources potentially available

Educational Influences on the Development of the Retarded Child

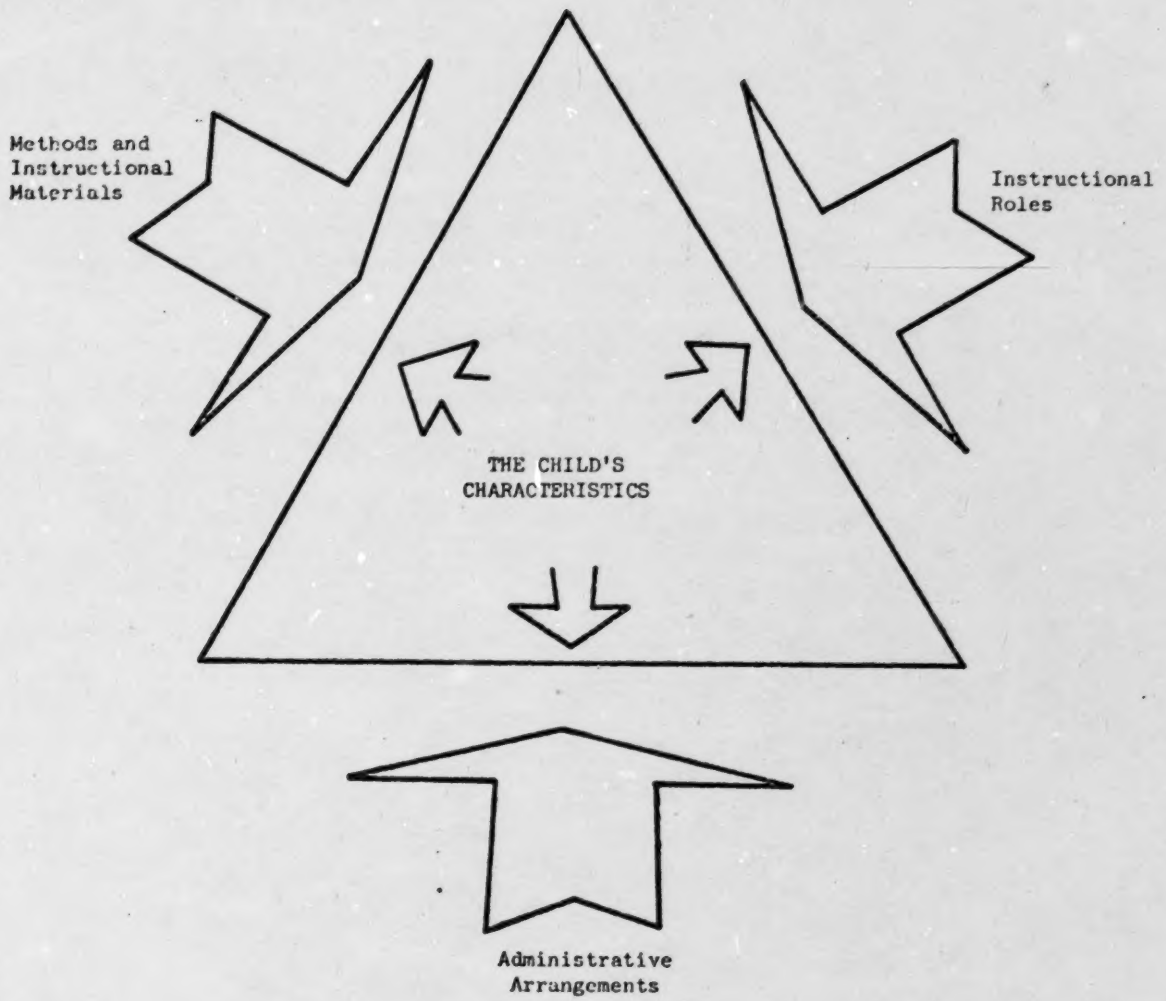


Table 2

Educational Services for EMR Children

Personnel Roles	Instructional Resources	Administrative Placements
1. Paraprofessionals--support and extend the capability of classroom teachers.	1. Programmed learning materials and other self-instructional programs.	1. Nongraded, open school arrangements--self-directed learning, individually prescribed instruction, etc.
2. Case managers--assume child advocacy roles, coordination of services, etc.	2. Instructional technologies-- a. teaching machines b. computer assisted instruction c. closed circuit TV d. listening centers e. language laboratories f. etc.	2. Regular class--special education support to classroom teacher.
3. Child development specialists--expand the capability of classroom teachers to accommodate a wider range of individual differences.	3. Instructional materials centers.	3. Regular class--special education assistance to classroom teacher; short term ancillary services to child (tutoring, diagnosis, etc.).
4. Instructional specialists--serve regular and special education teachers in consultative roles.	4. Diagnostic and prescriptive instruction centers.	4. Regular class--intensive special education assistance to children and classroom teachers.
5. Resource learning specialists--serve children directly and consult with classroom teachers; specialize in particular developmental areas(language development, mathematics, etc.).	5. Specialized curriculum materials and remedial education systems.	5. Special class--some academic and non-academic instruction in regular classes.
6. .Diagnostic specialists--diagnose educational problems; prescribe appropriate materials.		6. Special class--only nonacademic contact in regular classes.
7. Special education tutorial personnel--provide short-term assistance to children.		7. Special class--no significant amount of contact with children in regular classes.
8. Special class teachers--serve very small groups of children with severe educational handicaps.		8. Special day school for retarded pupils--no significant contact with children in regular school settings.
		9. Homebound instruction--individual instruction for children who are unable to attend school.
		10. Residential school--contact with pupils in nearby community programs.
		11. Residential school--no significant amount of contact with pupils in community programs.

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in both regular and special education programs. The material in this Table and in Figure 2 suggests that special education assistance need not be defined simply in terms of administrative arrangements, but may also be defined in terms of instructional roles and specialized curricula. The undue stress by special educators on the issue of administrative arrangements has tended to obscure the rich potential for achieving truly differentiated instruction for children through alterations in curricula and/or professional roles.

In this section, selected aspects of philosophy, instructional methods and materials, instructional roles and administrative arrangements were presented as primary ingredients in developing and implementing special education programs for retarded children. In the following section several programs will be discussed which present interesting, contrasting alternatives to special classes.

Program Profiles

Individually Prescribed Instruction (IPI). IPI is an instructional system which is based on specific objectives, interlinked with diagnostic tools and teaching materials (Scanlon, 1971). It stresses assessment of pupil abilities and the continuous monitoring of pupil progress. As the pupil enters a new instructional situation, the teacher diagnoses his abilities through a placement instrument and an achievement pre-test representing the objectives within a learning unit. Based on this initial assessment and her knowledge of the child's learning characteristics, the teacher writes a learning prescription utilizing the set of objectives and matching instructional materials produced for the program. The teacher's role in an IPI program becomes that of progress

analyzer, tutor and instructional manager while the traditional teacher often is primarily the vender of instruction.

The child's role is also somewhat different in a IPI classroom than in the traditional setting. Though he is in a standard classroom, the child acts as his own instructional agent by working toward mastery of objectives that have been prescribed for him. As he finishes a piece of work to his satisfaction, he turns it in to a teacher aide who scores it and informs the teacher of the student's progress. The teacher then re-prescribes work for him which coincides with his performance. When appropriate, she administers unit tests to determine content mastery and curriculum-embedded tests which measure progress toward an objective.

Based on principles of reinforcement theory, IPI is an instructional system designed to facilitate classroom learning through careful specification of objectives, pacing of instruction, and reward for mastery. Since this system does not depend on the attainment of any prerequisite achievement level, it is not dependent upon homogeneous grouping for its implementation. In an IPI classroom, retarded children might work at their own pace with normal peers withoug revealing their inadequacies in school learning which are often amplified in group instructional settings.

Downriver Learning Disability Center. The Downriver Learning Disability Center provides another program which emphasizes pupil assessment as an approach to planning instruction (School District of the City of Wyandotte, 1971). The Center, supported by a consortium of twelve school districts, is an outpatient facility for learning disabled children in which specially trained staff accept individual referrals. In contrast to the IPI Program, which includes a complete

program of assessment, instructional programming, management, and evaluation, the Downriver Center staff perform the assessment function only, relying on the child's home teacher and school to follow through with his instruction.

The classroom teacher initiates a referral to the Center by sending a request to the local district's special services department. The school psychologist for the district administers some preliminary tests to determine the child's eligibility for learning disability services. From the total number of children within each district, the local district or the private school selects their quota to be sent to the Center. This selection is usually based both on the child's needs and the teacher's ability to profit from the Center experience.

On an appointed day the child and his classroom teacher come to the Center. The teacher arrives before the child in order to participate in some preliminary discussion of the case and to attend a general orientation session in which the diagnostic tests are explained. The teacher observes the child being tested and views a slide-tape presentation of a demonstration of materials likely to be recommended for her child.

Toward the end of the afternoon, a Center staff member coordinates a case staffing conference including the classroom teacher, building principal, remedial reading teachers, speech correctionist, school district diagnostician and other persons involved with the child. During this conference, particular attention is paid to recommendations involving instructional suggestions. The Center instructs the teacher in the use of the materials which have been recommended and provides her with materials if they are unavailable within the district.

Ten weeks after the assessment, a Center staff member pays a follow-up visit to the teacher to discuss the child's progress and to help update the recommendations. Center personnel are also constantly available to the teacher for consultation.

The Downriver Learning Disability Center offers a promising approach to augmenting the regular class teacher's assessment skills and knowledge of instructional strategies, thereby reducing the necessity for special class services.

The next two programs illustrate alternatives which emphasize the structuring of teacher roles and use of instructional materials.

The Educational Modulation Center. This program is aimed at the improvement of a child's specific educational skills so that he can remain in the regular class (Adamson & Van Etten, 1970; Van Etten, 1969). According to the authors of the program, selection of appropriate materials constitutes an important and complex problem. Therefore, the Center has developed a retrieval system which matches a child's learning characteristics with the attributes of instructional materials which have been analyzed for specific content. Here is how the system works using a hypothetical case: A child is evaluated and found to be functioning intellectually at a level comparable to a six-year-old child. The evaluation has also revealed that the student has a deficit in alphabet recognition, and that he has been observed to respond best to auditory material.

What steps are required to retrieve the needed material? First the diagnostician, utilizing the prescriptive materials retrieval system, selects the descriptor card for alphabet recognition, the child's specific

content disability. The second card selected is the descriptor card appropriate for an intellectual level of a six-year-old. The third descriptor card selected is for taped material suitable for alphabet recognition purposes. When these descriptor cards are placed over a light box, an illumination process refers the user to materials matching all these descriptors. By changing or eliminating various descriptor cards, large amounts of material can be searched in a short span of time.

Though materials prescription is the major thrust of the project, consultants are also provided who work in classrooms to assess a child's abilities and explore educational approaches in cooperation with his teacher. Other services include consultative help for schools wishing to use prescriptive teaching techniques, and a research program to sharpen the use of instructional methods and materials.

The Educational Modulation Center represents an inroad toward solving one of the major problems that has plagued special educators for a long time, i.e., the matching of instructional materials to selected characteristics of children.

Harrison Resource Learning Center. This program is located in an inner-city school in Minneapolis, Minnesota. Co-sponsored by the Department of Special Education at the University of Minnesota and the Minneapolis Public Schools, the Center has two purposes: (1) to provide direct prescriptive instruction to intellectually subnormal children enrolled in regular classes, and (2) to train special education students from the University in the skills of prescriptive teaching.

The Harrison Resource Learning Center is one example of how a school can alter the roles of its teaching staff by building in an additional organizational alternative which can become an integral part of the school's

teaching program. The resource teacher assumes direct responsibility for some daily instruction of children in areas of greatest educational need, as well as for assisting the child's classroom teacher in designing appropriate educational experiences.

Perhaps a brief case history would be helpful in illustrating the resource teacher's role. Charles (IQ = 68) has been in a special class for retarded children for almost a year. When the Resource Center opened, Charles was one of the first children recommended for placement back into a regular class with support from the resource teacher. At first, Charles spent most of the school day in the Resource Learning Center. The resource teacher began by emphasizing experiences designed to improve his self-confidence, while gradually increasing the demands placed upon him for achievement in basic school subjects. Over a period of two months, the length of time that Charles spent in regular class was gradually increased except for those periods in the regular class schedule when the material was beyond his skill level. During this period he gained more than one grade level in reading and almost two grade levels in arithmetic. His teachers and mother also reported a marked improvement in his attitudes toward school.

Charles presently spends 45 minutes per day in the Resource Center, receiving help primarily in reading. His resource and regular class teachers hope to reduce this out-of-regular-class time even further by designing instructional content that will permit him to progress without requiring an inordinate amount of the regular class teacher's attention.

In the first year of the program, eight special class children were returned to regular classes and an additional 12 of 28 regular class children who were on the waiting list for placement in special classes also

received help. None of these children have been re-recommended for special class placement in the two years of the Center's operation.

Summary. The programs described above were chosen for discussion because they offer interesting and contrasting alternatives to special class placement for EMR children. Widespread adoption of these programs would be ill advised, however, since there is insufficient evidence to judge their efficacy at the present time. Nevertheless, it appears that these programs are attempting to employ the principle of normalization by providing alternatives minimizing the perceived differences between the instructional experiences of retarded and normal children; and these programs appear to embody the principle of individualization by customizing instructional roles, instructional materials and administrative arrangements to suit the learner's perceived needs and characteristics.

Summary

The central thesis of this article is that polemical arguments for and against special class placement for EMR children have achieved their intended purpose of making special educators sensitive to the inadequacies of current practices. Now is the time to begin the painstaking development, implementation and evaluation of a range of viable alternatives. As an antidote to the present controversy that grips the field of special education, it is further recommended that less emphasis be placed upon conceptualizing the educational difficulties of handicapped children in terms of categories (Reynolds, 1970), unless such classifications can be translated into effective educational treatments.

If the principles of normalization and individualization are to become realities in the education of EMR children, general education must become more accommodative to individual differences in children. Fortunately, there are examples where this accommodation is occurring in programs, such as: the Differentiated Staffing Program of Temple City (Stoner, 1969) in which teachers assume differing roles because of their competencies in specific instructional areas and strengths in dealing with particular learning attributes of children; ungraded schools which promote children on the basis of achievement and not on the basis of chronological age; open classrooms where young children play an active role in determining their "instructional menus" (Silberman, 1970).

Special educators must invest greater resources in efforts to enhance the capability of general education programs to better accommodate to the educational and social needs of handicapped children. Perhaps this point can be sharpened by viewing special education as developmental capital (Deno, 1970). Deno (1970) has recommended that special education serve as a vehicle of setting the general education system in competition with itself, initiating an internal challenge that will generate and sustain creative tension. In her words:

> The special education system is in a unique position to serve as developmental capital...to upgrade the effectiveness of the total public education effort. It has the motivation and the justification to enter into cooperative competition with regular education, to act as advocate for those children who fall out or are squeezed out of the educational mainstream's sieve-like bottom half /Deno, 1970; p. 231/.

Attempts to improve present services for handicapped children should be firmly rooted in sound philosophical tenets. All too often special education programs have developed without proper consideration

for statements of purpose and tests of assumptions. Ambiguity of purpose and failure to test the validity of assumptions have led to the practice of judging program effectiveness by the simple, expedient metric of program expansion. Special education services must be judged by their effects on the development of children as well as by the extent to which these services approximate those afforded children in general education.

At this time hasty attempts to abolish special classes seem premature. Instead, special class programs for EMR children should be re-structured to serve only those children who cannot remain in a regular classroom, even with specialized assistance. Enrollment in special classes could then be greatly reduced from present level since such classes would serve only children with greatest attenuation in cognitive and affective development.

One major caveat must be considered in developing programs: special educators should avoid precipitate implementation of alternatives to special classes. Sudden implementation of programs without the necessary safeguards of objective evaluation leads inevitably toward institutionalizing program models without validating their effectiveness. The rush in many areas to replace special classes with resource rooms seems as premature and unwise as persistent recommendations to abolish special classes. Before any special education program is implemented, a number of prior questions must be pondered: (1) What are the goals of the program? (2) Whom should the program serve? (3) What are the major constituents of the program? (4) What services (curricula) should be provided in the program? (5) Upon what assumptions is the program based? (6) What are the roles of special and regular education personnel in the program?

(7) What criteria should be employed to judge the effectiveness of the program? (8) Under what conditions is the program effective?

Above all special educators must shed their preoccupation with the special class issue and develop comprehensive research and development programs designed to increase the quality, variety and availability of services to handicapped children. Further attempts to provide instructional alternatives to special classes for EMR children will likely lead to trivial results unless such efforts are accompanied by careful planning and evaluation. The interests of children we serve require that future research contribute to the development of programs by yielding information on the efficacy of services for individual children, rather than by focusing on the effects of treatments upon groups of children differing in a variety of school-relevant behaviors. This approach to research and evaluation in special education assumes that no program is best for all children, but that program effectiveness varies depending upon the characteristics of children, settings and personnel. An approach to research focusing on individual differences rather than group characteristics might lead to both accretions in knowledge and improvements in services to handicapped children.

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